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EXAMINER	
MUNSON, GENE M	
ART UNIT	PAPER NUMBER
2811	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 712,286	Applicant(s) H. ZHANG ET AL
	Examiner G. MUNSON	Group Art Unit 2811

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-20 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 11 9(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☒ received in Application No. (Series Code/Serial Number) 09/115,840.

☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

Office Action Summary

That parent application S.N. 115,840 has issued as a patent needs to be inserted in the specification.

On page 13, "dopants" (line 3) and "Schottky" (line 19) are misprinted. The specification should be proofread.

Claims 3, 8, 13 and 18 are rejected under 35 U.S.C. 112, first and second paragraphs. The "shift register circuit over said substrate" is of unclear scope and does not appear to have support in the specification (pages 20-21) and Figures 3 and 4. In claims 3 and 8, "said substrate" has no clear antecedent.

Claims 5 and 10 are rejected as double patenting of the non-statutory type over claims of the Zhang et al patent No. 6,194,740, which issued from parent application, considered together with Yamamoto et al. See MPEP 804. To use optical sensors of the patent claims in a line image sensor, it would have been obvious to use an arrangement with transistors as in Yamamoto et al (Figure 3), with the optical sensors as the light detection elements, in order to achieve a line image sensor.

Claims 15 and 20 are rejected as double patenting of the non-statutory type over claims of the Zhang et al patent No. 6,194,740 considered together with Morozumi. To use optical sensors of the patent claims in an area image sensor, it would have been obvious to use an arrangement with transistors with rows and columns as in Morozumi (Figure 1), with an optical sensor connected to a transistor as is a light element 18 (Figure 3), in order to achieve an area image sensor. Furthermore, it would have been obvious to use a parallel capacitor (Figure 12) in order to store charge generated in an optical sensor (Claim 20).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ormum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 4, 6, 7 and 9 are rejected under 35 U.S.C. 102 as unpatentable as shown by Yamamoto et al. See Figure 3.

Claims 3 and 8 are rejected under 35 UC 103 as unpatentable over Yamamoto et al, as in the above rejection, considered together with Ozawa. It would have been obvious to use a shift register as in Ozawa (Figure 1A) to implement a pulse generating circuit 106 as in Yamamoto et al (Figure 3).

Claims 11-14 and 16-19 are rejected under 35 U.S.C. 102 as unpatentable as shown by Morozumi et al. See Figures 1, 3, 12.

Claims 11-20 are rejected under 35 U.S.C. 102 as unpatentable as shown by Tsukada et al. See Figures 31, 35-37 with "transistor" 100 and "optical sensor" 98 as in Figure 35b. The capacitors (claim 16) read on inherent parasitic capacitances.

Claims 5 and 10 are rejected under 35 U.S.C. 103 as unpatentable over Yamamoto et al, as in the above rejection of claims 1 and 6, considered together with Tsukada et al. It would have been

obvious to use a phototransistor 98 as in Tsukada et al (Figures 35-37) for an light detection element in a line image sensor as in Yamamoto et al (Figure 3) in order to amplify the signal to improve the signal to noise ratio.

Claims 16-20 are rejected under 35 U.S.C. 103 as unpatentable over Tsukada et al, as in the above rejection, considered together with Morozumi et al, as in the above rejection of claim 16. It would have been obvious to use a parallel capacitor as suggested by Morozumi (Figure 12) order to store charge generated in an optical sensor.

The other references are cited of interest in showing use of image arrays.

No claim is allowed.

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